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EXAMINER	
MULLER, BRYAN R	

ART UNIT	PAPER NUMBER
3723	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,382	BODDY ET AL.	
	Examiner	Art Unit	
	BRYAN R. MULLER	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26 and 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 June 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/14/2005, 2/1/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "56" has been used to designate both an airflow passage (Figures 1, 4 and 5) and what appears to be a light panel or control panel (Fig. 6) and reference character "38" has been used to designate both a drive wheel (Figures 4 and 8) and a brush bar pinion (Fig. 7). It is suggested that the applicant remove reference number "56" from Fig. 6 and change reference number "38" in Fig. 7, as well as line 22 on page 10 of the specification, to "38a". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 22b (Fig. 3). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action

to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the turbine pinion that engages the toothed external surface of the drive belt must be shown (Claim 22) or the feature(s) canceled from the claim(s). For the sake of the current Office Action, the Examiner will assume that claim 22 is intending to only disclose that the motor pinion engages the toothed external surface and that the claim is also intended to depend from claim 20, instead of claim 19, to be discussed further below. No new matter should be entered.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

a. The word "in" should be removed from line 14 on page 8 of the specification.

b. As discussed supra, reference number "38" in line 22 on page 10 of the specification should be changed to correspond with a corrected reference number "38" from Figure 7 (suggested "38a").

c. It is assumed that the term "the catch 22" in line 28 on page 7 of the specification should be changed to "upper link 22b" to correct the lack of reference number "22b" in the specification, as discussed supra.

Appropriate correction is required.

Claim Objections

6. Claim 1 is objected to because of the following informalities: the words "characterized in that" should be deleted from line 4 and a comma (,) should be added after the word "passage" in line 6. Appropriate correction is required.

7. Claim 2 is objected to because of the following informalities: the words "in that it further includes" should be deleted from line 2. Appropriate correction is required.

8. Claim 3 is objected to because of the following informalities: the words "in that" should be deleted from line 2. Appropriate correction is required.

9. Claim 7 is objected to because of the following informalities: the words "that it further includes" should be deleted from line 3. Appropriate correction is required.

10. Claim 9 is objected to because of the following informalities: the word "or" should be deleted from line 1. Appropriate correction is required.

11. Claim 21 is objected to because of the following informalities: the term "the... motor pinion" in line 3 of claim 21 lacks proper antecedent basis. It is assumed by the Examiner that the applicant that the motor pinion being referenced is the motor pinion that is disclosed in claim 20, and accordingly that claim 21 is intended to alternatively be dependent on either claim 20 or 19, and will be treated as such for the sake of the current Office Action. Appropriate correction is required.

12. Claim 22 is objected to because of the following informalities: the terms "the... motor" in line 2 of claim 22 and "the toothed external surface of the drive belt" both lack proper antecedent basis. Additionally, the embodiment wherein the turbine pinion that engages the toothed external surface of the drive belt is not shown in the drawings. For the Sake of the Current Office Action, it will be assumed that the claim is dependent on

claim 20, instead of claim 19, to correct the lack of antecedent basis for "the... motor". Additionally, it is suggested that the applicant delete the words "turbine or" in line 2 of claim 22 to correct the objections to the drawings under 37 CFR 1.83(a), as discussed supra. Finally, it is also suggested that the applicant include the limitation "the drive belt is toothed on its external surface and" after the word "wherein" in line 2 of claim 22 to correct the lack of antecedent basis for "the toothed external surface of the drive belt". Appropriate correction is required.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 2, 4-6, 8-10, 13, 15, 17, 18 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Leathers (1,968,530).

15. In reference to claim 1, Leathers discloses a head for a suction cleaner comprising a lower housing portion (4) and an upper housing portion (5) that is movable relative to the lower housing portion between a closed position for use (as shown in Fig. 1) and an open position in which airflow passages within the head are opened from above. The airflow passages of Leathers lead from the bottom opening (16), up past brush (12) and upper housing portion (5). Thus, the airflow passages are clearly opened from above when the upper housing portion (5) is in the opened position.

16. In reference to claim 2, Leathers further discloses a rotatably mounted tool (12) that is also exposed from above when the upper housing portion (5) is in the opened position.

17. In reference to claim 4, the apparatus of Leathers does not include a sole plate.

18. In reference to claim 5, Leathers further discloses that when the upper housing portion is closed, it defines, in combination with the lower housing portion, an airflow opening which in use is adjacent the ground. The lower housing portion essentially forms the entire airflow opening, thus the upper housing portion, *when combined with* the lower housing portion, may be considered to from the airflow opening.

19. In reference to claim 6, Leathers further discloses that the tool element (12) is located within the airflow opening.

20. In reference to claim 8, when the upper housing portion of Leathers is in the open position, airflow paths within the head are accessible for cleaning or maintenance.

21. In reference to claim 9, Leathers further discloses that the tool element is driven by a drive mechanism (6-9) and when the upper housing portion is in the open position, the drive mechanism is accessible for cleaning and maintenance.

22. In reference to claim 10, Leathers further discloses that the tool element (12) is readily removable without the use of any tool (pg. 1, line 110 – pg. 2, line 5). Leathers discloses that the tool element may be removed by raising springs (25) free of part 22, which would clearly be capable of achieving by hand. Thus, the tool element may be removed without the use of tools.

23. In reference to claim 13, Leathers further discloses that the drive mechanism includes an electric motor with in the head.

24. In reference to claim 15, Leathers further discloses that the drive mechanism for rotation of the tool element includes a drive belt (8) having internal and external surfaces, and wherein the drive belt does not pass around the tool element.

25. In reference to claims 17 and 18, Leathers further discloses that a circumferential drive surface (14) is provided on the tool element, in the form of a pulley, and the external surface of the belt has a cross-section which frictionally engages the pulley. The term "pulley" is defined as "a wheel driven by or driving a belt or the like, used to deliver force to a machine"[1]. In this case, the outer circumference (14) of tool element (12) that engages the belt is circular and thus, may be considered to be a wheel, which is driven by the belt to deliver rotational force to the tool element. Therefore, the drive surface (14) of Leathers is considered to be a pulley. Further, any cross-section taken of the belt will include at least a portion of the external surface of the belt, which cooperates with the pulley. Thus, the cross-section of the belt clearly cooperates with the pulley.

26. In reference to claim 23, Leathers further discloses that the drive mechanism, including a motor, has a drive wheel (6) which frictionally engages the drive belt.

27. In reference to claims 24 and 25, Leathers further discloses that the drive mechanism further includes a freely rotatable support wheel (7) around which the drive belt also passes, and which holds the drive belt adjacent to and in engagement with the tool element.

28. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bass (1,833,961).

29. In reference to claim 1, Bass discloses (in second embodiment of Figs. 4 and 5) a head for a suction cleaner comprising a lower housing portion and an upper housing portion (27) that is movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above. The airflow passages of Bass lead from the bottom opening (11), up past brush (14) and upper housing portion (25). Thus, the airflow passages are clearly opened from above when the upper housing portion (25) is in the opened position.

30. In reference to claim 2, Bass further discloses a rotatably mounted tool (14) that is also exposed from above when the upper housing portion (25) is in the opened position.

31. In reference to claim 3, Bass further discloses that the lower housing portion does not include any part that extends laterally in front of the tool element such that when the upper housing portion is in the open position, the tool element is also exposed from the front. As shown in Figures 5 and 6, the upper housing portion includes the entire lower plate that passes over the front and bottom of the tool element such that the tool element would also be open from the front when the upper housing portion is in the open position.

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[1] *Dictionary.com Unabridged (v 1.1)*

32. In reference to claim 5, Bass further discloses that when the upper housing portion is in the closed position it defines, in combination with the lower housing portion, an airflow opening (11) which in use is adjacent the ground.

33. In reference to claim 6, Bass further discloses that the tool element (14) is located within the airflow opening.

34. In reference to claim 7, Bass further discloses that the head comprises at least one catch (28) to retain the upper housing portion in the closed position which is releasable without the use of any tool.

35. In reference to claim 8, when the upper housing portion of Bass is in the open position, airflow paths within the head are accessible for cleaning or maintenance.

36. In reference to claim 9, Bass further discloses that the tool element is driven by a drive mechanism (16-19) and when the upper housing portion is in the open position, the drive mechanism is accessible for cleaning and maintenance.

37. In reference to claim 10, Bass further discloses that the tool element (14) is readily removable without the use of any tool. The tool element may clearly be removed simply by removing the belt from either of pulley 16 or 18 and moving the tool element out of sockets (15), which could inherently be done without the use of any tools.

38. Claims 1, 2 and 5-10 are rejected under 35 U.S.C. 102(b) as being anticipated by McCormick (6,226,832).

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39. In reference to claim 1, McCormick discloses a head for a suction cleaner comprising a lower housing portion (36) and an upper housing portion (38 and 58) that is movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above, as seen in Fig. 2).

40. In reference to claim 2, McCormick further discloses a rotatably mounted tool (40) that is also exposed from above when the upper housing portion (38/58) is in the opened position (also seen in Fig. 2).

41. In reference to claim 5, McCormick further discloses that when the upper housing portion is in the closed position it defines, in combination with the lower housing portion, an airflow opening (best seen in Fig. 4) which in use is adjacent the ground. The lower housing portion essentially forms the entire airflow opening, thus the upper housing portion, *when combined with* the lower housing portion, may be considered to from the airflow opening.

42. In reference to claim 6, McCormick further discloses that the tool element (40) is located within the airflow opening.

43. In reference to claim 7, McCormick further discloses that the head comprises at least one catch (86 or 96) to retain the upper housing portion in the closed position which is releasable without the use of any tool.

44. In reference to claim 8, when the upper housing portion of McCormick is in the open position, airflow paths within the head are accessible for cleaning or maintenance (as seen in Fig. 2).

45. In reference to claim 9, McCormick further discloses that the tool element is driven by a drive mechanism (34, 98) and when the upper housing portion is in the open position, the drive mechanism is accessible for cleaning and maintenance (as seen in Fig. 2).

46. In reference to claim 10, McCormick further discloses that the tool element (40) is readily removable without the use of any tool.

47. Claim 29 is rejected under 35 U.S.C. 102(b) as being anticipated by Bewley (4,980,945).

48. Bewley discloses a cleaning apparatus that is adapted for use with a suction cleaner (12), the cleaning apparatus comprising a connector (84, 86) adapted to be removably connected to a wand (15/20) of the suction cleaner, a lower housing portion (66) secured to the connector (when assembled for use; Fig. 1) and having ground engaging wheels and an upper housing portion (76) secured to the connector (when assembled for use; Fig. 1), wherein the lower housing portion provides support for a rotatably mounted brush bar (72), and the upper housing is pivotable (Col. 5, lines 8-10) relative to the lower housing portion between a closed position and an open position in which the brush bar is exposed from above (as seen in Fig. 7).

Claim Rejections - 35 USC § 103

49. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

50. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormick (6,226,832) in view of Bewley (4,980,945) and Stone (3,924,085).

51. In reference to claims 11 and 12, McCormick discloses the head for a suction cleaner of claims 1, 2 and 9, as discussed supra, but fails to disclose that a switch is provided to prevent the drive mechanism from being operated when the upper housing portion is in the open position. However, it is old and well known for appliances and tools, especially those that are mass produced for commercial sale, to have some form of disconnect switch to prevent electrical shock or injury due to moving parts to users when an access panel or door is in an opened position for maintenance or repair. Additionally, Bewley discloses a head for a suction cleaner having an upper housing that may be opened to access the drive mechanism and tool element for repair and cleaning, as discussed supra, and Bewley further discloses that a safety device is desirable, that will disconnect electrical power to the components of the head when the upper housing portion is opened, to prevent a user from being shocked or injured due to user contact with exposed or moving components (Col. 5, lines 31-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head of McCormick with a safety device to prevent a user from being shocked or injured due to user contact with exposed or moving components, as

taught by Bewley. Additionally, Stone discloses a safety start device for domestic appliances wherein a switch (32) is provided on part of the housing, which will disconnect power to the components of the appliance to prevent operation when the door (14) of the appliance is in an opened position such that a user may contact moving parts in order to prevent injury to a user from contacting the moving components of the appliance. Further, the safety device of Stone provides the movable access door (14) with a protrusion (40) from an inner portion of the door, which contacts the switch (32) when the access door is moved to the closed position to allow the components of the appliance to operate when the door is closed. Therefore, it further would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head of McCormick with a similar safety device, as disclosed by Stone, to a user from being shocked or injured due to user contact with exposed or moving components. Thus, it would have been obvious to provide the switch of Stone to the lower housing portion of McCormick and to provide the upper housing portion (equivalent of the access door of Stone) with a protrusion that will only contact the switch when the upper housing portion is in the closed position.

52. Claims 1, 2, 9, 15-17, 20, 22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al. (2002/0104185) in view of McCormick (6,226,832).

53. In reference to claim 1, Weber discloses a head for a suction cleaner that comprises upper and lower sections of the head housing. However, Weber fails to

disclose that the upper housing portion is movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above. As discussed supra, McCormick discloses a head for a suction cleaner wherein the upper housing portion is attached to the lower housing portion such that the upper housing portion may quickly and easily be moved relative to the lower housing portion to an open position wherein airflow passages within the head are opened from above, which will allow a user to change the headlight, agitator and/or agitator drive belt, as well as clear debris from air passages or the agitator or agitator drive belt, by providing simple removal of parts without requiring the user to invert, tilt or otherwise manipulate the position of the entire suction cleaner (Col. 2, lines 45-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head of Weber with an upper housing portion that is movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above, to allow a user to change the headlight, agitator and/or agitator drive belt, as well as clear debris from air passages or the agitator or agitator drive belt, by providing simple removal of parts without requiring the user to invert, tilt or otherwise manipulate the position of the entire suction cleaner, as taught by McCormick.

54. In reference to claim 2, Weber further discloses that a rotatably mounted tool element (107) is mounted within the head and it would further be obvious, in the combination of Weber and McCormick that positioning the upper housing portion in the

open position will also expose the rotatably mounted tool element from above, also taught by McCormick.

55. In reference to claim 9, Weber further discloses that the tool element is driven by a drive mechanism (97-99 in Fig. 11 or 100, 102, 104, 106, 108, 110, 112 in Fig. 12) and in view of the disclosure of McCormick that the openable upper housing section allows a user to replace the drive belt, it further would have been obvious that at least the belt (97 or 110) and the drive wheels of the drive mechanism of Weber would be accessible for cleaning or maintenance such as replacing the drive belt when the upper housing portion is in the opened position.

56. In reference to claim 15, Weber further discloses that the drive mechanism (embodiments in Figs. 11 and 12) includes a drive belt (97 or 110) having internal and external surfaces, and wherein the drive belt does not pass around the tool element. The embodiments in Figs. 11 and 12 of Weber both comprise two tool elements, wherein the drive belt only passes around one of the tool elements. Thus, the drive element being referred to above is the front tool element that does not have the drive belt passing around it.

57. In reference to claim 16, Weber further discloses (in embodiment of Fig. 12) that the drive mechanism includes a drive pinion (on the front tool element; not numbered) provided on the tool element, and the drive belt is toothed (paragraph 40) on its external surface (shown in Fig. 12 as being toothed on the internal and external surfaces) and engages the drive pinion.

58. In reference to claim 17, Weber further discloses (in embodiment of Fig. 11) that a circumferential drive surface is provided on the tool element (on wheel 99) and that the external surface of the belt frictionally engages the drive surface.

59. In reference to claim 20, Weber further discloses that the drive mechanism includes an electric motor (106) which drives a motor pinion (100; via belt 102 and axle 104) engaging the belt (110).

60. In reference to claim 21, Weber further discloses that the drive belt is toothed on its internal surface, as discussed supra, passes around and engages with the motor pinion, as shown in Fig. 12.

61. In reference to claim 22, in the embodiment of Fig. 12, Weber discloses that the tool element may be driven by the belt passing around a drive pinion such that the internal surface of the drive belt engages the drive pinion or alternatively that the tool element may be driven by an external surface of the drive belt engaging the drive pinion wherein the drive belt does not pass around the tool element such that the tool elements rotate in opposite directions. Therefore, Weber teaches that a drive belt may engage pinions of a drive mechanism with the inner or outer surface. Therefore, it further would have been obvious that the drive mechanism of Weber may alternatively be configured such that the motor pinion engages an outer surface of the drive belt to rotate the drive belt in an opposite direction for different applications, adapt the drive mechanism to fit in different sized heads, or to provide a driving mechanism for tool elements having different locations relative to the motor. Thus, it would have been

obvious that the motor pinion of Weber may alternatively engage the toothed outer surface of the drive belt.

62. In reference to claim 24, Weber further discloses that the drive mechanism further includes a support wheel (112) around which the drive belt passes, and which holds the drive belt adjacent to and in engagement with the tool element.

63. In reference to claim 25, it is further obvious that the support wheel is freely rotatable to reduce any drag or resistance on the drive belt that may reduce the efficiency of the drive mechanism.

64. In reference to claim 26, Weber further discloses that the support wheel (112) is a gear, and thus, obviously has teeth, which may also be considered to be a pinion.

65. Claims 14, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al. (2002/0104185) in view of McCormick (6,226,832) as applied to claims 1, 2, 9 and 15 and further in view of Worwag (2001/0008036).

66. In reference to claim 14, Worwag discloses a head for a suction cleaner having a rotatably mounted tool element that is driven by a drive mechanism and Worwag teaches that the power may be provided to the drive mechanism to drive the tool element by a turbine (12) that is positioned within the airflow path of the head or alternatively may be driven by an electric motor (paragraph 11). Therefore, it further would have been obvious to one of ordinary skill in the art at the time the invention was made that the electric motor in the drive mechanism of Weber may alternatively be replaced by a turbine that is positioned within the airflow paths of the head.

67. In reference to claim 19, it further would have been obvious that the turbine in the drive mechanism will drive a turbine pinion (100; via belt 102 and an axle, similar to 104) engaging the belt.

68. In reference to claim 21, Weber further discloses that the drive belt is toothed on its internal surface, as discussed supra, wherein, when the motor is replaced by a turbine, also discussed supra, the belt passes around and engages with the turbine pinion, similar to Fig. 12.

Conclusion

69. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Allgeier et al. (6,513,190), Kajihara (5,659,919), Kramer et al. (5,651,362), Becker (2,253,997), Hampton et al. (5,414,893), Burrage (2,910,721), Fillery (3,482,276), Gage (2,482,166) and Magarian (2,963,270) all disclose vacuum heads or cleaning apparatuses having similar structure and/or function as the applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN R. MULLER whose telephone number is (571)272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail III can be reached on (571) 272-4485. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bryan R Muller/
Examiner, Art Unit 3723
12/9/2007